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Technology Center 2100

Application Number: 10/021,505
Filing Date: December 19, 2001
Appellant(s): KIRK ET AL.

Jim Zegeer
<u>For Appellant</u>

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02/07/2006 appealing from the Office action mailed

08/10/2005.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or

be directly affected by or have a bearing on the decision in the pending appeal is contained in the

brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in

the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal in the

brief is correct.

(7) Grouping of Claims

The rejection of claims 1-18 stand or fall together because appellant's brief does not

include a statement that this grouping of claims does not stand or fall together and reasons in

support thereof See 37 CFR 1.192(c)(7).

(8) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(10)   Prior Art of Record

No prior art is relied upon by the examiner in the rejection of the claims under appeal.

US 6115393 A   Engel et al.   9-2000

US 6144962 A   Weinberg et al.   11-2000

(11)   Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engel et al. (US 6115393 A), hereinafter referred as Engel in view of Weinberg et al. (US 6144962 A), hereinafter referred as Weinberg.

> a. Engel shows (claims 1 and 6) a graphical user interface (column 6, line 66-column 7, line 9; column 26, line 15-21) for a network management system equipped with network management logic for managing a communication network (column 1, line 19-20) via the graphical user interface. Engel also shows (Fig. 19; column 25, line 41-47; column 26, line 22-29) layers of the network maps, navigating through the layers of network hierarchy and a screen of data link layer. Engel does not show (claims 1 and 6) explicitly a window of two panes showing layer 2 (or layer 1) and layer 3 entities respectively.
>
> b. Weinberg shows (Fig. 5; column 4, line 15-17; column 17, line 21-39) a window of two panes showing the navigation through a map on one pane and zooming in

the other pane in an analogous art for the purpose of visualization of web sites and

hierarchical data structures.

c. It would have been obvious to a person of ordinary skill in the art at the time of

the invention was made to modify Engel's functions of network monitoring to

include explicitly Weinberg's functions of navigating through a map in one pane

and zooming on another pane.

d. The modification would have been obvious because one of ordinary skill in the art

would have been motivated to zoom in the contents of a map and still keep the

current context of the map per Weinberg's teaching as applied to the network

management. This technique is well known in MS-Window file manager/window

explorer and as suggested in various other patents.

e. Regarding claim 2, Engel shows (column 2, line 42-62; column 25, line 41-47;

column 26, line 22-29) wherein the network management system further

comprises means for querying a managed object database storing connectivity

information regarding field installed data transport equipment.

f. Regarding claim 3, Engel shows (column 2: line 42-62; column 25, line 41-47;

column 26, line 22-29; Fig. 18 and 19) wherein the network management system

further comprises means for extracting from the managed object database layer-

by-layer connectivity information regarding Layer-3 entity representations

selected in the first view pane for display in the second view pane.

g. Regarding claim 4, Engel shows (column 26, line 22-29; Fig. 18 and 19) wherein

the network management system further comprises means for inspecting a

containment hierarchy of instantiated manageable entity objects modeling field

installed data transport equipment specifying connectivity information.

h. Regarding claim 5, Engel shows (column 2, line 42-62; column 25, line 41-47;

column 26, line 22-29; Fig. 18 and 19) wherein the network management system

further comprises means for extracting from the containment hierarchy of

instantiated managed entity objects layer-by-layer connectivity information

regarding Layer-3 entity representations selected in the first view pane.

Together Engel and Weinberg disclosed all limitations of claims 1-6. Claims 1-6 are

rejected under 35 U.S.C. 103(a).

2. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engel et

al. (US 6115393 A), hereinafter referred as Engel in view of Weinberg et al. (US

6144962 A), hereinafter referred as Weinberg.

a. Engel shows (claim 7 and 12) graphical user interface (column 6, line 66-column

7, line 9; column 26, line 15-21) for a network management software application

(claim 24; column 10, line 32-44) having network management logic for

managing a communication network via the graphical user interface (column 1,

line 19-20). Engel also shows (Fig. 19; column 25, line 41-47; column 26, line 22-

29) layers of the network maps, navigating through the layers of network

hierarchy and a screen of data link layer. Engel does not show (claims 7 and 12)

explicitly a window of two panes showing layer 2 (or layer 1) and layer 3 entities

respectively.

b. Weinberg shows (Fig. 5; column 4, line 15-17; column 17, line 21-39) a window of two panes showing the navigation through a map on one pane and zooming in the other pane in an analogous art for the purpose of visualization of web sites and hierarchical data structures.

c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Engel's functions of network monitoring to include explicitly Weinberg's functions of navigating through a map in one pane and zooming on another pane.

d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to zoom in the contents of a map and still keep the current context of the map per Weinberg's teaching as applied to the network management. This technique is well known in MS-Window file manager/window explorer and as suggested in various other patents.

e. Regarding claim 8, Engel shows (column 2, line 42-62; column 25, line 41-47; column 26, line 22-29) wherein the network management software application further comprises means for querying a managed object database storing connectivity information regarding field installed data transport equipment.

f. Regarding claim 9, Engel shows (column 2: line 42-62; column 25, line 41-47; column 26, line 22-29; Fig. 18 and 19) wherein the network management software application is further comprises means for extracting from the managed object database layer-by-layer connectivity information regarding Layer-3 entity representations selected in the first view pane for display in the second view pane.

g. Regarding claim 10, Engel shows (column 26, line 22-29; Fig. 18 and 19) wherein the network management software application is further comprises means for inspecting a containment hierarchy of instantiated manageable entity objects modeling field installed data transport equipment specifying connectivity information.

h. Regarding claim 11, Engel shows (column 2, line 42-62; column 25, line 41-47; column 26, line 22-29; Fig. 18 and 19) wherein the network management software application further comprises means for extracting from the containment hierarchy of instantiated managed entity objects extract layer-by-layer connectivity information regarding Layer-3 entity representations selected in the first view pane.

Together Engel and Weinberg disclosed all limitations of claims 7-12. Claims 7-12 are rejected under 35 U.S.C. 103(a).

3. Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engel et al. (US 6115393 A), hereinafter referred as Engel in view of Weinberg et al. (US 6144962 A), hereinafter referred as Weinberg.

a. Engel shows (claim 13 and 18) a method of managing a communications network in a centralized network management context (column 1, line 19-20) via a graphical user interface (column 6, line 66-column 7, line 9; column 26, line 15-21). Engel also shows (Fig. 19; column 25, line 41-47; column 26, line 22-29) layers of the network maps, navigating through the layers of network hierarchy and a screen of data link layer. Engel does not show (claims 13 and 18) explicitly

a window of two panes showing layer 2 (or layer 1) and layer 3 entities respectively.

b. Weinberg shows (Fig. 5; column 4, line 15-17; column 17, line 21-39) a window of two panes showing the navigation through a map on one pane and zooming in the other pane in an analogous art for the purpose of visualization of web sites and hierarchical data structures.

c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Engel's functions of network monitoring to include explicitly Weinberg's functions of navigating through a map in one pane and zooming on another pane.

d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to zoom in the contents of a map and still keep the current context of the map per Weinberg's teaching as applied to the network management. This technique is well known in MS-Window file manager/window explorer and as suggested in various other patents.

e. Regarding claim 14, Engel shows (column 2, line 42-62; column 25, line 41-47; column 26, line 22-29) further comprising querying a managed object database storing connectivity information regarding field installed data transport equipment.

f. Regarding claim 15, Engel shows (column 2: line 42-62; column 25, line 41-47; column 26, line 22-29; Fig. 18 and 19) wherein querying the managed object database, the method further comprises extracting layer-by-layer connectivity

information regarding Layer-3 entity representations selected in the first view

pane for display in the second view pane.

g. Regarding claim 16, Engel shows (column 26, line 22-29; Fig. 18 and 19) further

comprising inspecting a containment hierarchy of instantiated manageable entity

objects modeling field installed data transport equipment specifying connectivity

information.

h. Regarding claim 17, Engel shows (column 2, line 42-62; column 25, line 41-47;

column 26, line 22-29; Fig. 18 and 19) wherein inspecting the containment

hierarchy of instantiated managed entity objects, the method further comprising

extracting layer-by-layer connectivity information regarding Layer-3 entity

representations selected in the first view pane.

Together Engel and Weinberg disclosed all limitations of claims 13-18. Claims 13-18

are rejected under 35 U.S.C. 103(a).

(12) *Response to Argument*

In response to Appellant's argument of

a. (page 10-12) "Engel does not teach or suggest a graphical user interface having a

single window in which two panes are displayed simultaneously, the first pane

displaying OSI Layer-3 entities, and the second pane displaying underlying OSI

Layer-2 entities corresponding to a selected one of the OSI Layer-3 entities shown

in the first pane.",

b. (page 13) "... navigating through layers of network hierarchy" is not defined

anywhere in the Engle reference.",

    c. (page 13-14) "However, the Engel reference relates to 'layers of the hierarchy, as provided by SNM' and not to the OSI hierarchy.",

    d. (page 16) "Scrolling through a map by simply dragging the dashed box 87 through the picture and simply enlarging what is in dashed box 87 is not a teaching or suggestion of appellants' invention.",

    e. (page 17) element 86 of the Weinberg reference is a window labeled "Pan Window" floating in front of the window entitled "Mercuryl - Astra". Therefore, Weinberg does not teach a single window having two panes.":

Engel shows that

    a. (column 1, lines 19-20) the art relates to monitoring and managing communication networks for computers, i.e. Engel is in the art of network monitoring and management,

    b. (FIG. 2) the layered structure of a network communication and a protocol tree within the layered environment, i.e. Engel does consider OSI layer structure,

    c. (Fig. 17) a logical map of the network as displayed by the Management Workstation, i.e. Engel displays on a graphical user interface OSI layer-3 or network layer entities,

    d. (column 6, line 66-column 7, line 5) SunNet Manager is used to provide a graphical network-map-based interface, to receive, store and display information, i.e. Engel is using a graphical network map of SunNet Manger,

    e. (Fig. 2; column 7, lines 20- 42) OSI model is used to present the layered protocol structures used in the communications between nodes on the network, including

network layer (OSI-layer 3) and data link layer (OSI-layer 2). Per Engel's Fig. 2,

IP is listed as OSI-layer 3 entity and Ethernet/MAC/LLC is listed as OSI-layer 2

entity,

f. (column 25, lines 45-47) IP statistics is collected for IP segment group, i.e. an IP

segment is an OSI-layer 2 path between two network nodes,

g. (column 25, lines 48-50) the data (IP statistics) keyed by MAC/IP addresses and

port numbers may be related to physical nodes entered into the network map, i.e.

Ethernet physical entities in OSI-layers,

h. (column 26, lines 22-26) a logical map illustrating the network components and

the relationships between them is per Fig. 17, i.e. OSI-layer 2 display and a

hierarchical network map is supported with navigation through the layers of the

hierarchy is provided and supported by SunNet Management,

i. (column 26, lines 27-32) the Management Workstations determine the network

topology, the network objectives and their connectivity to create a network map,

i.e. the layered network map is based upon the physical entities such as stations

and LAN segment,

j. (column 28, lines 40-44) the node with alarm is highlighted on the map and the

node status is propagated up through the (map) hierarch to support the case where

the node is not visible on the screen as provided by SunNet Manger, i.e. the map

is for OSI-data link and network layers, and

k. (column 28, lines 45-56) the user selects an object from the map and invokes

summary display tools for three pan displays.

In summary:

    a. Engel shows monitoring layered network protocol per OSI model, displaying and navigating through network (map) hierarchical, i.e. layers, and using multiple pans for showing network node status and segment (path) statistics.

    b. Engel does not show explicitly multiple pans are used for display OSI-layer 2 entities in one PAN and OSI-layer 3 entities in another PAN simultaneously on a screen.

    c. However, Engel does show propagating node status up through the layers that it would be visible on a network management station and two PAN display (Fig. 18) in Summary Tool.

To compensate the deficiency of not showing OSI-layer 2 entities in one PAN and OSI-layer 3 entities in another PAN simultaneously on a screen:

    a. Weinberg is brought in to show (Fig. 5 and column 17, lines 21-39) that two PANs are used for zooming from one PAN the contents as displayed in another PAN simultaneously on a screen in an analog art of Visualization of web sites and hierarchical data structures, here zooming from one pan to another is to select a item form one pan and provide item's detail on another pan.

    b. Weinberg shows (abstract) that the art is for facilitating the analysis and management of management of Web sites and Web site connections.

    c. Weinberg also shows (abstract) that "Various map navigation and URL filtering features are provided to facilitate the task of identifying and repairing common Web site problems, such as links to missing URLs."

d. Engel and Weinberg talks about displaying and zooming the network map, i.e. navigating through the layers of hierarchy.

e. The relative positions of PANs per discussion is not an issue as each of Engel and Weinberg shows a different scheme of positioning PANs, with Engel has positioned PANs up and down in a window (Fig. 18) in Summary Tool and Weinberg has positioned one PAN on the top the other PAN.

f. It is obvious to a person of ordinary skill in the art at the time invention that the capability of displaying two PANs on one screen was attractive in the network management per Engel and Weinberg's teaching.

g. It is obvious to a person of ordinary skill in the art at time of inventor that the combing Weinberg's visual zooming the network map into Engel's navigating through the layers of hierarchy provides in identifying the node status from a higher layer, i.e. OSI-layer 3 entity to a lower layer, i.e. OSI-layer 2 entity as per Engel's teaching (item 8 above).

Additional arts are identified to show that multiple PANs are used to manage network of multiple layers, including:

a. Tonelli et al. (US 5821937) (abstract, Fig. 31, column 15, lines 22-42: hierarchical network design sheets),

b. Kulkarni et al. (US 5848243 A) (abstract; Fig. 2, 4A-4C and 6A-6C; column 6, lines 20-27; column 6, line 47-column 8, line 3: layered network node containment in two PANs in one window) and

c. Hayball et al. (US 6233610 B1) (Fig. 6 and 22; column 13, line 13-column 14,

line 8: application and implementation level views in one window).
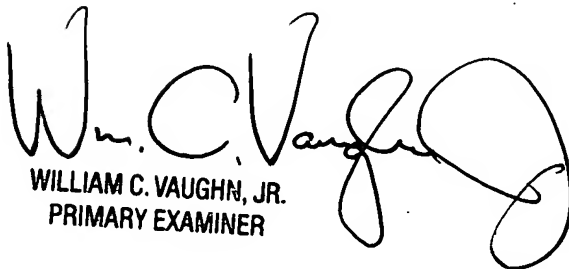
(13)   Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related

Appeals and Interferences section of this examiner's answer.

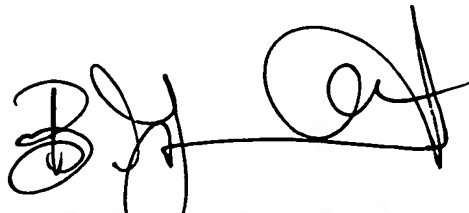For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Peling A Shaw

April 3, 2006

WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER

BUNJOB JAROENCHONWANIT
SUPERVISORY PATENT EXAMINER